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TEXT for PRESENTATION by
V. L. HORTE, PRESIDENT
CANADIAN ARCTIC GAS STUDY LIMITED
to TORONTO SOCIETY of FINANCIAL ANALYSTS
TORONTO -- APRIL 18th, 1973 --

I'm afraid that it is not the customary type of presentation to financial analysts that I am going to present today.

I have no financial statements to present, no projections of earnings, nor investments, nor rates of returns, nor even a detailed outline of the plan of financing to show how we would propose to raise $5 billion for a pipeline to transport natural gas from the North Slope of Alaska and the Mackenzie Delta region of northern Canada.

What I would like to do today is sketch briefly the nature of financing requirements we anticipate, outline something of what we are doing in the way of economic impact studies, and provide some indication of what we think development and utilization of our northern petroleum resource could mean to Canada.

But before we get into this, I would like also to review the reasons that compel us to believe that Canada needs a pipeline during this decade to provide transportation for our large potential gas resources in the Mackenzie Delta region.

The four provinces of western Canada now provide, on balance, all of

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Canada's oil and gas requirements, plus a net export. This supply source, however, accounts for less than one-quarter of our potential petroleum reserves. Exploration to-date has discovered more than half of the estimated potential reserves of western Canada, and the remaining reserves are becoming increasingly difficult to find.

It is questionable whether or not we can accelerate the rate at which new reserves of natural gas are being proved up in western Canada sufficiently to meet the rate of depletion and also to provide for the growth of Canadian demand.

We are approaching the time that we must start to tap the 75 percent of our petroleum gas reserves which lie outside of western Canada, primarily in the Arctic and offshore regions if we are to ensure the continued availability of adequate energy supplies. Considering the long lead times required we cannot delay too long in firming up our plans to tap these frontier petroleum resources. We are convinced that Canada will require access to our northern gas resources by the end of this decade in order to assure the supply of our own needs. It is also apparent that in order to gain economic access to this supply, a pipeline must also serve the much larger U.S. market.

With a current demand of some three billion cubic feet per day and an annual growth rate of some 250 million cubic feet per day, the Canadian market cannot provide the volume required to support a pipeline with a deliverability capacity in excess of four billion cubic feet per day. Northern gas cannot pre-empt the present demand being met by western Canada, nor can you save up the demand growth since energy demand growth is not "saveable."

While we cannot envision the Canadian market providing the demand volume required to support the pipeline, neither can we see Canadian reserves from the Mackenzie Delta providing all of the supply required to support this pipeline by the time that it will be required to meet Canadian needs. Our present plans contemplate obtaining about half of the four billion cubic feet per day of deliveries from the Alaskan North Slope, and half from northern Canada. Without this Alaskan supply, we would have to not only prove up twice the volume of gas reserves in northern Canada, but we would have to find an amount which would free nearly four billion cubic feet per day as surplus to Canadian needs and thus available for export.

So we need both the U.S. market and a U.S. gas supply from Alaska if we are to make it possible to economically utilize our Arctic mainland gas resources within a reasonably foreseeable period of time.

And if we were to decide upon any lengthy deferment of a pipeline to transport this northern gas across Canada, then we would very likely lose the availability of Alaskan gas to this transportation system. El Paso Natural Gas has already embarked on an $11 million program to determine the feasibility of moving Prudhoe Bay gas by pipeline across Alaska to the Pacific tidewater at Seward, where it could be liquefied for shipment by tanker to California. We believe that this is a more costly and less advantageous means for the United States to gain access to its large Alaskan gas supply. But if overland pipeline transportation across Canada is subject to lengthy delay, the United States would have little choice but to pursue this second alternative.

With this preface of why Canada needs a gas pipeline from the Arctic during

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this decade, I would like to turn briefly to an outline of our financing requirements. We still have considerable study to do in this area. As a result, at this date we do not have a detailed plan for financing the largest project ever proposed anywhere by the private sector. Certainly we do have a lot of study work underway in this area, and we are being assisted in this by our financial advisors, the firm of Wood Gundy Limited in Canada, and Morgan Stanley in the United States. I might mention, paranthetically, that the appointment of these two firms to act as financial advisors to Arctic Gas specifically does not provide them with any preferred status in the actual task of financing. When the time comes for us to raise funds, we expect to be involved in the largest offering of securities ever made in Canada, and you will appreciate that this will require the active participation of a great number of financial houses.

The total capital required, as I mentioned, will be about $5 billion. The facilities in Canada will represent about $4.4 billion of this, including $3.5 billion during the first three years of construction to bring the system on stream, and the remainder during the next two years for added compressor horsepower to achieve full deliverability capacity.

We anticipate that about 20 percent of the required capital, or some $1 billion, will be equity capital. The $4 billion of debt capital will comprise a combination of such forms as 20 or 25-year first mortgage bonds, some junior debt money which may have provisions for conversion to equity, and bank loans.

We have said that it will be our objective to secure more than 50 percent of

the equity capital in Canada, and that the only limitation to Canadian ownership of this pipeline will be the amount of funds which Canadians choose to invest in it. We believe that we can secure more than half of the equity in Canada and also expect that, in the growing Canadian capital market, we will in addition be able to raise substantial debt money. Obviously a very large segment of the debt money, as well as some of the equity, will have to be raised in the United States.

I will not take the time today to outline all of the activities involved in our extensive program of studies. We have so far spent some $30 million to examine in detail all of the engineering, environmental and economic feasibility aspects of our proposed Arctic Gas pipeline, and these studies are still not yet completed. I believe that by now the financial community is quite well aware of the general nature of our studies and our project, and, if you require further details, may I refer you to the brochure and additional material which we have available here for you.

For the remainder of my time today, I would like to address a few comments and observations on the debate about the implications of the Arctic Gas pipeline for the Canadian economy.

A major part of our current program of studies is devoted to this particular aspect. Two econometric models we are looking at are TRACE and CANDIDE. The CANDIDE model, developed by six federal government departments was the principal tool used by the Economic Council of Canada in its projection of Canada's economic potential for the 1970's, contained in last year's annual review. The TRACE model was developed at the University of Toronto's the equity capital in Canada, and that the only limitation to Canadian ownership of this pipeline will be the amount of funds which Canadians choose to invest in it. We believe that we can secure more than half of the equity in Canada and also expect that, in the growing Canadian capital market, we will in addition be able to raise substantial debt money. Obviously a very large segment of the debt money, as well as some of the equity, will have to be raised in the United States.

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Institute for the Quantitative Analysis of Social and Economic Policy.

Our studies are assessing the impacts of the proposed pipeline on the Canadian economy, both nationally and regionally, in terms of such factors as employment, national income, interest rates, inflation, Gross National Product, balance of payments, and the exchange value of the Canadian dollar. These studies are still not yet completed, and the results of the model projections, of course, will vary with the assumptions which must be made. For this reason we are developing a wide range of projections under varying assumptions.

The preliminary conclusion of these model studies to-date is that there would be little effect on the exchange rate of the Canadian dollar during the 1975-1980 construction period. The direct and indirect changes in Canadian imports, exports and capital flows which would result from the financing and construction of the pipeline appear to come very close to balancing out during each year of this period. These sophisticated econometric model projections sometimes are beyond the simple slide-rule calculations of an engineer, so that if you would like more details on these during the discussion period following my address, I will refer you to Mr. Yarnell.

Beyond the construction phase, it is important to assess the impact on Canada's balance of payments position resulting from the operation of the pipeline and the export of Canadian gas to the United States. We calculate that this might result in a contribution to Canada's balance of payments position in the order of $500 million to $750 million annually.

Considering that Canada's trade position during the past 25 years or so

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has been primarily a deficit position, and that further deficits in the balance of current accounts throughout most of the remainder of this decade are forecast by the Economic Council, foreign income in the order that I have mentioned from the operation of the pipeline would hardly appear to pose a threat to the Canadian economy. Indeed, there is a very strong case for saying that this in itself would provide an important contribution to Canada's economic well-being.

We should recognize that this year we will produce more than $2 billion worth of oil and gas. The total for the past 27 years has been nearly $21 billion. What would our balance of payments position be today if we did not have this production? To my simple way of thinking, we will require the foreign exchange earnings which will flow from the operation of the Arctic Gas pipeline if we are, in fact, going to attain the growth which we all hope for in our economy.

Employment generation is another vital consideration. Although the results are still very preliminary, they suggest that the total income and employment impact of investment in the pipeline project will be on the same order of magnitude as investment in the rest of Canadian industry. Direct employment during construction will amount to approximately 7,000; once operations commence, this will drop to about 600. However, indirect employment in other industrial activity resulting from the pipeline's construction and operation will be substantial. And I will comment on this aspect in more detail in just a moment.

Yet another area of particular interest in our studies is an assessment of the economic and sociological impact of the project in the North. From our studies,

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we are satisfied already that the number of long-term jobs that can be anticipated from the pipeline and associated oil and gas development will be far greater in numbers than it will be possible to meet from the available labour force of the region. In fact, we regard the real challenge as being one of ensuring that, through adequate training and other programs,northerners are given full opportunity to exploit the job potential of northern development.

I would like to go back to the matter of overall economic and employment impact of northern petroleum development, and suggest that if you want an impression of what this could mean, all you have to do is take a look at what has happened in Alberta.

I was born and raised in Alberta. During virtually my entire working career, I have been associated with the industry which has converted this province to a thriving, prosperous region.

Consider where Alberta stood and the prospects that it faced in 1945, just prior to the discovery of oil at Leduc. The population was little more than 800,000 -- two-thirds rural, and one-third urban. Per capita income was $692, or nine percent below the national average of $755.

In 20 years following the discovery of Leduc, Alberta's population increased from 800,000 to nearly 1.5 million. The number of jobs doubled. Per capita income nearly quadrupled, and by 1966 was four percent above the national average compared with nine percent below the average in 1945. Manufacturing output, stimulated by the presence of the petroleum producing industry, jumped from a rate of $80 million to $500 million per year. With an increase in

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employment of petroleum engineers, geologists and geophysicists from about 30 to 3,000, the industry spawned in Alberta a pool of professional, technical and managerial skills that represents a significant national "brain gain." If these be "hewers of wood and drawers of water," their efforts represent a degree of sophistication and productivity which few if any other industrial activities in Canada can match.

In 26 years following the Leduc discovery, royalty payments and lease revenues have enriched the Alberta treasury by $3.6 billion, with $4.5 billion collected by all four western provinces. For its current fiscal year, the Alberta government expects to collect more than $400 million from oil and gas, nearly one-third of its total income.

We all know -- because we are told so often -- that pipelines employ so very few people. To operate the proposed pipeline, Arctic Gas will require the employment of perhaps 600 people. However, the major pipelines that transport all of the oil and gas shipped out of Alberta do not employ very many people either. Less than 2,000 operating peoples in fact. But entirely dependent upon these pipelines are more than 30,000 jobs involved in the direct operations of the petroleum producing industry in the province, and more than 200,000 jobs in Alberta directly and indirectly dependent on the petroleum producing industry. And this does not include the jobs in other parts of Canada which stem directly from the industry's purchases, approaching half a billion dollars per year of manufactured goods from Canadian suppliers outside of Alberta.

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With a potential in the Northwest Territories and Yukon, excluding the Arctic Islands, approaching the estimated potential reserves of western Canada, I feel safe in saying that we can expect a similar impact on the total Canadian economy from this northern development.

I can best conclude my point in this area by quoting from a recent address delivered by Ronald Ritchie, Senior Vice-President of Imperial Oil Limited, I have excerpted from Mr. Ritchie's talk as follows:

"In the case of primary resource industries, the total system in which direct and second-order income and employment effects must be measured -- if we are to get at the truth -- is relatively much larger than it is in less highly capitalized industries such as much of secondary manufacturing...The service and support industries, all them employing labour without which the primary resource industry could not function, tend to be large in total and widely dispersed through the economy. They include everything from steel mills and equipment manufacturers through construction firms, engineering services, computer services, communications networks, transportation operations by land, water and air, and financial services."

In my mind, in Canada we need to pursue those endeavours which will give us a certain kind of economic growth. We need that type of economic growth which will create the jobs we require, which will give us the best rewards for our efforts in these jobs, which will maintain our international competitive strength, and which will afford the best opportunities of achieving our social and environmental objectives.

This is the type of economic growth which I believe the Arctic Gas pipeline can help achieve.

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